

WHAT IS CLAIMED IS:

1. A housing for a turbocharger comprising  
a rotor space (15) for receiving and accommodating a  
turbine rotor (18), said rotor space (15) being  
surrounded by a housing jacket (6, 7, 22) which is at  
least partially made of sheet metal;  
connection pipe means (4') for connecting to at least one  
exhaust gas manifold (3, 4) of a combustion motor(20);  
**characterized in that**  
not only the housing jacket (6, 7, 22) of the rotor space  
(15) is made of sheet metal, but in that at least also  
the connection pipe means (4') for the connection with the  
exhaust gas manifold (3, 4) is made of sheet metal and is  
in thermal connection with said housing jacket (6, 7, 22).
2. Housing as claimed in claim 1, characterized in that said  
connection pipe means (4') is part of a collector tube  
element (4) which is inserted into the exhaust gas manifold  
(3, 4), preferably of stamped sheet metal, wherein  
preferably also exhaust gas elbow pipe (1) is made in the  
same way.
3. Housing according to claim 1 or 2, characterized in that  
the heat conductive connection is at least partially  
realized by a sliding connection.
4. Housing as claimed in claim 3, characterized in that said  
heat conductive connection comprises a conically widening  
portion (32; 32') of one of the tubular elements, in  
particular of the housing jacket (6, 7, 22) advantageously  
followed by a cylindrical portion (32'') into which the  
tubular end of the respective other element, in particular  
the tubular connection element (4'), is inserted, the

conically widened portion advantageously having an angle ( $\alpha$ ) of at most  $30^\circ$ , preferably of at most  $20^\circ$  and more preferably of at least  $7^\circ$  and whereby the inner surface of the cylindrical portion (32'') abuts onto the outer surface of the connection pipe means.

5. Housing according to claims 3 or 4, characterized in that said heat conducting connection comprises a cylindrical portion (32'') of one of the tubular elements, in particular the housing jacket (6, 7, 22) into which the tubular end of the respective other tubular element, in particular the connection pipe means (4'), is insertable, wherein preferably the inner surface of the cylindrical portion (32'') abuts onto the outer surface of the connection pipe means (4').
6. Housing according to any one of the preceding claims, characterized in that said housing jacket (6, 7) consists of at least two layers of metal sheet arranged one on top of the other, whereof preferably the outer one (22) is thicker than the inner one (6), in particular 1.5 to 3 times thicker.
7. Housing according to claim 6, characterized in that between said two layers of metal sheet (6, 22) at least over the bigger part of the extension of the housing, a distance of at least 1 mm is provided, preferably of 8 mm and in particular between 2 and 5 mm.
8. Housing according to claims 3, 4 or 5 and 6 or 7, characterized in that the inner, resp. one of the inner sheet metal layers (6) of the sheet metals layers (6, 22), which are arranged one on top of the other, forms a sliding

connection, whereas in the respective outermost layer (22) of elements, the respective parts are welded together.

9. Housing according to any one of the preceding claims, characterized in that on top of the inner layer of sheet metal (6) of the housing jacket (6, 7, 22) there is at least one layer in form of an insulation layer (24, 25), preferably made of a textile tissue, such as a woven or knitted tissue, within which is embedded a metal layer (26), in particular a sheet metal layer.
10. Housing according to any one of the preceding claims, characterized in that said housing jacket (6, 7) is assembled from at least two mutually complementary spiral portions, which are connected to each other by welding, whereas preferably also an intake gas channel (21) of the housing wall and said connection pipe means (4') are made lengthwise in two parts and respectively in one piece with the corresponding spiral portion.